



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/009,325	05/13/2002	Donald Jaffrey	A-71183/DJB/MAK	6999
7590	01/03/2005		EXAMINER	
			CREPEAU, JONATHAN	
			ART UNIT	PAPER NUMBER
			1746	
DATE MAILED: 01/03/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

ih

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	10/009,325	JAFFREY, DONALD
	Examiner Jonathan S. Crepeau	Art Unit 1746

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 22 October 2004.

2a) This action is FINAL.                    2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 2-5 and 7-14 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_\_ is/are allowed.

6) Claim(s) 2-5 and 7-14 is/are rejected.

7) Claim(s) \_\_\_\_\_ is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All    b) Some \* c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____ .
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ .	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
	6) <input type="checkbox"/> Other: _____ .

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on October 22, 2004 has been entered.

This Office action addresses claims 2-5, 7-13, and newly added claim 14. The previous rejections under 35 USC §102 and §103 have been withdrawn, but the claims are newly rejected under 35 USC §103. This action is non-final.

### ***Claim Rejections - 35 USC § 103***

2. Claims 2-5 and 7-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 99/13522 in view of Caule et al (U.S. Patent 3,811,874).

Regarding claims 1, 9-11 and 13, WO '522 is directed to a solid oxide fuel cell comprising a separator plate (122) which is made of a heat and oxidation-resistant alloy such as a ferritic stainless steel (see page 6, line 5 et seq.). On the cathode side, the plate has an aluminum oxide layer of 1-5 microns on the surface thereof.

However, the reference does not expressly teach the composition of the alloy as recited in claims 2-5 and 13.

The patent of Caule et al. is directed to an oxidation resistant iron base alloy. In column 1, line 54 et seq., the reference teaches that the alloy may comprise 1-7 wt% Al, 1-4% Si, up to 0.04% P, up to 0.04% S, up to 1.5% Mn, and up to 2% carbon. The alloy does not contain Cr (see Table A). The alloy further has a layer of  $\text{Al}_2\text{O}_3$  on the surface when exposed to an oxidizing environment (see col. 5, lines 23-27).

Therefore, the invention as a whole would have been obvious to one of ordinary skill in the art at the time the invention was made because the artisan would be motivated to use the oxidation-resistant alloy of Caule et al. as the material of the oxidation-resistant interconnect plate of WO '522. In column 1, lines 34-49, Caule et al. teach that their alloy has a "low cost" and exhibits "improved resistance to corrosion in ambient environments without the disadvantage of extensive red rust rundown." Accordingly, the artisan would be motivated to use the alloy of Caule et al. in the interconnect plate of WO '522. It is noted that the alloy composition disclosed by Caule et al. is considered to be anticipatory of the alloy composition recited in claims 2-5 and 13 because each individual element range overlaps.

Regarding claim 8, which recites that source material for the alloy includes scrap metal, as noted above, this limitation does not have to be accorded patentable weight because it does not further limit the structure of the component.

*Response to Arguments*

3. Applicant's arguments filed October 22, 2004 have been fully considered but they are not persuasive insofar as they apply to the present rejection. Applicants state that there would be no motivation to substitute the alloy of Caule for the alloy of Minh, given the satisfactory oxidation resistance of the alloy of Minh. This assertion has been considered herein in regards to the WO '522 reference. As stated above, both the Caule and the WO '522 references are concerned with the oxidation resistance of their respective alloys. WO '522 specifically teaches that is alloy may be a stainless steel. In column 1, line 35, Caule teaches that it is a principal object of the invention to provide a "low cost iron base alloy having oxidation resistance comparable to or superior to that exhibited by stainless steels." As such, the artisan would be motivated to substitute the alloy of Caule for the alloy of WO '522 in order to obtain the same or better oxidation resistance at a lower cost. Accordingly, the instantly claimed subject matter is still believed to be rendered obvious by the prior art.

*Conclusion*

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jonathan Crepeau whose telephone number is (571) 272-1299. The examiner can normally be reached Monday-Friday from 9:30 AM - 6:00 PM EST. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Barr, can be reached at (571) 272-1414. The phone number for the

organization where this application or proceeding is assigned is (571) 272-1700. Documents may be faxed to the central fax server at (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jonathan Crepeau  
Primary Examiner  
Art Unit 1746  
December 29, 2004